

As correctly noted in the Office Action Summary, claims 1-13 were pending. By the present response, claims 1-7 have been amended. Thus, upon entry of the present response, claims 1-13 remain pending and await further consideration on the merits.

Support for the above-identified claim amendments can be found at least at the following locations of the original disclosure: (1) claims 1 and 9 as originally filed; and (2) page 4, lines 4-6 of the specification.

Entry of the present response is appropriate pursuant to 37 C.F.R. §1.116 since the above claim amendments serve to reduce the number of issues present upon appeal by addressing certain informalities in the claim language, and do not act to introduce any new limitations into the claims, thus the present claim amendments do not necessitate reexamination and/or further search.

CLAIM REJECTIONS UNDER 35 U.S.C. §112, SECOND PARAGRAPH

Claims 2-7, 9 and 13 stand rejected under 35 U.S.C. §112, second paragraph on the grounds set forth in paragraph 1 of the Official Action. Reconsideration and withdrawal of these rejections is respectfully requested.

Claim 2 stands rejected on the grounds that the phrase "selected from the group formed by . . . and colorants" is confusing. This assertion is respectfully traversed. However, in order to advance prosecution, applicants have clarified this language appearing in claim 2 in an effort to expedite prosecution.

It should be appreciated that 35 U.S.C. §112, second paragraph does not require applicant to recite alternative language in Markush format. Ex parte Wu, 10 USPQ2d 2031, 2032 (B.P.A.I. 1989); Ex parte Cordova, 10 USPQ2d 1949, 1950 (B.P.A.I. 1987).

Claim 2 is further rejected on the grounds that the parentheses around the language "one-component or multi-component" confuses the claim. By the present response, applicants have amended claim 2 to remove this expression, thereby rendering the above-noted ground of rejection moot.

Claim 3 stands rejected on the grounds that the language "the polyorganosiloxanes - the main constituents" is confusing. By the present response, applicants have amended claim 3 in a manner which addresses this rejection. Claim 3 is further rejected on the grounds that the phrase "it being possible" is confusing and unclear. By the present response, claim 3 has been further amended to address this ground of rejection as well. Finally, the phrase "haloalkyl radicals . . . chlorine and/or fluorine atoms" is objected to as being confusing and unclear. This assertion is respectfully traversed. It is respectfully submitted that the above-quoted claim language is clear on its face to those of ordinary skill in the art. For instance, the existing claim language clearly defines the alkyl and haloalkyl radicals as having a certain number of carbon atoms and a certain number of chlorine or fluorine atoms. Applicants fail to see any ambiguity in the existing claim language. Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 4 stands rejected on the grounds that the phase "chosen from" is indefinite. This assertion is respectfully traversed. The grounds of rejection seems to imply that alternative limitations must be recited in a form of Markush groupings. MPEP

§ 2173.05(h) is cited in support of this assertion. However, this is incorrect. As expressly set forth in the above-cited section of the MPEP, "alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims . . . 'wherein R is A, B, C or D' shall also be considered proper." Thus, contrary to the assertion contained in the grounds of rejection, the phrase "chosen from" is not inherently indefinite.

Claim 4 further stands rejected on the grounds that the phrase "crosslinking at . . . is indefinite and unclear as to whether this recitation constitutes a positive process limitation." By the present response, applicants have amended this language to recite that the compositions D are "crosslinkable at room temperature." There is no uncertainty or ambiguity with regard to this expression. Such polyorganosiloxane compositions are commonly defined by their ability to crosslink at room temperature (e.g. - RTV compositions). Thus, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 4 also stands rejected on the grounds that the phrase "the heat . . ." lacks antecedent basis. By the present response, applicants have amended claim 4 in a manner which addresses this rejection.

Reconsideration and withdrawal of the rejections are respectfully requested.

Claim 5 stands rejected on the grounds that the phrase "it being possible" is confusing and unclear. By the present response, applicants have amended claim 5 in a manner which addresses this ground of rejection. Thus, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 6 stands rejected under on the grounds that reference to RTV compositions lacks antecedent basis. By the present response, applicants have amended claim 6 in a manner which addresses this ground of rejection. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 6 stands rejected on the grounds that the phrase "crosslinking . . ." is indefinite and unclear. Claim 6 has been amended in the same manner as claim 4, and is sufficiently clear for the same reasons previously noted. Therefore, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claim 6 further stands rejected on the grounds that the reference to "the heat" lacks antecedent basis. By the present response, claim 6 has been amended to address this ground of rejection as well. Thus, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 7 stands rejected on the phrase that "crosslinking . . ." is indefinite and unclear. Claim 7 has been amended in the same manner as claim 4, and is sufficiently clear for the same reasons previously noted. Therefore, reconsideration and withdrawal of this rejection is respectfully requested.

Claim 7 is further rejected on the grounds that the reference to "the heat" lacks antecedent basis. By the present response, claim 7 has been amended in a manner which addresses this ground of rejection. Thus, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 9 stands rejected on the grounds that the claim references another claim "as defined in" but does not specifically identify any other claim. By the present response,

claim 7 has been amended in a manner which addresses this rejection. Thus, reconsideration and withdrawal of the rejection is respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. §102

Claims 1-3, 9 and 11 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Matsushita* on the grounds set forth in paragraph 4 of the Official Action.

This rejection is respectfully traversed.

The present invention is directed to an improved composition, and method of its use, for providing good arc-tracking and arc-erosion resistance properties.

A composition formed consistent with the principles of the present invention is embodied in claim 1. Claim 1 recites:

1. *(Twice Amended) A composition for enhancing the arc-tracking and arc-erosion resistance properties of an article comprising:
an effective amount of a mixture A, B or C formed from:
in regard to mixture A, constituents A1 + A3 where constituent A1 is platinum in the form of a platinum complex or compound and constituent A3 consists of a combination of FeO and Fe₂O₃;
in regard to mixture B, mixture B consisting of at least one of: constituents B1 + B2 where constituent B1 has the meaning of constituent A1 and constituent B2 comprises cerium (IV) oxide and/or hydroxide; and
constituents B1 + B3 where constituent B1 has the meaning of constituent A1 and constituent B3 has the meaning of a combination of cerium (IV) oxide and/or hydroxide and titanium oxide TiO₂; or
in regard to mixture C, constituents C1 + C2 where constituent C1 has the meaning of constituent A1 and constituent C2 consists of a combination of constituent B3 and constituent A3;
in constituent A3, the ratio of the amount by weight of FeO to that of Fe₂O₃ lies within the range going from 0.1:1 to 9:1;*

in constituent B3, the ratio of the amount by weight of cerium (IV) oxide and/or hydroxide to that of TiO_2 lies within the range going from 0.6:1 to 6:1;
in constituent C2, the ratio of the amount by weight of constituent A3 to that of constituent B3 lies within the range going from 0.02:1 to 1:1;
in a polyorganosiloxane composition D for obtaining a silicone elastomer, either crosslinkable at room temperature or with the heat from polyaddition reactions in the presence of a platinum catalyst, or crosslinkable at high temperature by the action of an organic peroxide or peroxides; and
the amounts of the various constituents A1, A3, B1, B2, B3, C1 and C2 lie within the ranges mentioned below;
the amount of platinum, expressed in parts by weight of elemental platinum, lies within the range going from 1 to 250 ppm with respect to the total weight of the polyorganosiloxane constituent(s) of the curable compositions D; and
the amounts of constituents A3, B2, B3 and C2 of mixtures A, B and C, expressed in parts by weight of the constituent, lie within the range going from 0.5 to 30 parts by weight per 100 parts of the polyorganosiloxane constituent(s) of the curable compositions D.

According to a further aspect, a method performed consistent with the principles of the present invention is set forth in claim 11. Claim 11 recites:

11. A method for enhancing the arc-tracking and arc-erosion resistance properties of an article, comprising incorporating an effective amount of the composition of claim 1 into said article.

Matsushita fails to anticipate either claim 1, claim 11, or any claim depending therefrom for at least the reasons noted below.

Applicants maintain that claim 1 is distinguishable over *Matsushita* for those reasons previously mentioned in the response filed July 31, 2000. The comments contained in said response are incorporated herein by reference.

Moreover, claim 1 recites a composition which includes a polyorganosiloxane which is "crosslinkable at room temperature or with the heat of polyaddition reactions in the presence of a platinum catalyst."

Matsushita also fails to disclose at least this aspect of claim 1. As readily apparent from the disclosure of *Matsushita*, the organopolysiloxane composition, and its added constituents, are not of the type which are crosslinkable at room temperature or crosslinkable with the heat from polyaddition reactions as required by claim 1. To the contrary, *Matsushita* quite clearly teaches that the organopolysiloxane materials disclosed therein are crosslinked with an organic peroxide catalyst at an elevated temperature (see, e.g. - column 6, lines 19-29).

Thus, *Matsushita* clearly fails to anticipate claim 1.

Moreover, with regard to claim 11, it has been expressly acknowledged that *Matsushita* fails to disclose the requirements of claim 11. Namely, *Matsushita* fails to disclose a method for enhancing the arc-tracking and arc-erosion resistance properties of an article as required by claim 11. Despite this deficiency, it has been asserted that such uses would have been obvious. However, the grounds of rejection are deficient in that there is no motivation taken from the teachings of the reference itself. Rather, the motivation is clearly derived from hindsight reconstruction from the prior art using applicants' own disclosure as a guide. Thus, the rejection is improper and should be withdrawn.

Claims 1-3, 8, 9 and 11 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Takita et al.* This rejection is respectfully traversed.

Applicants continue to assert that *Takita et al.* is distinguishable over claim 1 for the reasons already of record. In particular, the arguments contained in the response filed July 31, 2000 are incorporated herein by reference.

Moreover, as noted above, claim 1 requires a polyorganosiloxane having a composition such that it is "crosslinkable at room temperature or with the heat from polyaddition reactions in the presence of platinum catalyst."

By contrast, *Takita et al.*, like *Matsushita*, teaches the use of polyorganosiloxane material having a composition such that it is crosslinkable with organic peroxides at elevated temperatures (column 4, line 60; column 6, lines 28-33). Thus, *Takita et al.* fails to anticipate claim 1 for at least this additional reason.

Moreover, with regard to claim 11, it is expressly acknowledged in the grounds of rejection that *Takita et al.* fails to teach a method of improving arc properties. Nonetheless, it is asserted that such improvements "will inherently be found in the prior art." However, it should be noted that claim 11 is not a composition claim. Rather, claim 11 requires a particular method of use of the composition recited in claim 1. Thus, *Takita et al.* clearly fails to disclose, or even suggest, the particular method required by claim 11. The inherency or lack thereof of properties of the material described by *Takita et al.* is not sufficient, absent some suggestion to one of ordinary skill in the art to carry out the particular method required by claim 11.

CLAIM REJECTIONS UNDER 35 U.S.C. §103(a)

Claims 4-7 and 10 stand rejected under 35 U.S.C. §103(a) as being obvious over *Takita et al.* This rejection is respectfully traversed.

Takita et al. fails to disclose, or even suggest, the subject matter of claims 4-7 and 10 for at least the same reasons noted above in connection with the discussion of claims 1 and 11. Thus, reconsideration and withdrawal of this rejection is also requested on the grounds previously stated.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

These changes have been made in accordance with 37 C.F.R. § 1.121 as amended on November 7, 2000 even though amendments made under the old Rule 1.121 will be accepted until March 1, 2001.

Respectfully submitted,

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Marked-up Claims 1-7 and 9

1. (Twice Amended) A composition for enhancing the arc-tracking and arc-erosion resistance properties of an article comprising:
 - an effective amount of a mixture A, B or C formed from:
 - in regard to mixture A, constituents A1 + A3 where constituent A1 is platinum in the form of a platinum complex or compound and constituent A3 consists of a combination of FeO and Fe₂O₃;
 - in regard to mixture B, mixture B consisting of at least one of: constituents B1 + B2 where constituent B1 has the meaning of constituent A1 and constituent B2 comprises cerium (IV) oxide and/or hydroxide; and
 - constituents B1 + B3 where constituent B1 has the meaning of constituent A1 and constituent B3 has the meaning of a combination of cerium (IV) oxide and/or hydroxide and titanium oxide TiO₂; or
 - in regard to mixture C, constituents C1 + C2 where constituent C1 has the meaning of constituent A1 and constituent C2 consists of a combination of constituent B3 and constituent A3;
 - in constituent A3, the ratio of the amount by weight of FeO to that of Fe₂O₃ lies within the range going from 0.1:1 to 9:1;
 - in constituent B3, the ratio of the amount by weight of cerium (IV) oxide and/or hydroxide to that of TiO₂ lies within the range going from 0.6:1 to 6:1;

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in constituent C2, the ratio of the amount by weight of constituent A3 to that of constituent B3 lies within the range going from 0.02:1 to 1:1;

in a polyorganosiloxane composition D for obtaining a silicone elastomer, either crosslinkable at room temperature or with the heat from polyaddition reactions in the presence of a platinum catalyst[, or crosslinkable at high temperature by the action of an organic peroxide or peroxides]; and

the amounts of the various constituents A1, A3, B1, B2, B3, C1 and C2 lie within the ranges mentioned below;

the amount of platinum, expressed in parts by weight of elemental platinum, lies within the range going from 1 to 250 ppm with respect to the total weight of the polyorganosiloxane constituent(s) of the curable compositions D; and

the amounts of constituents A3, B2, B3 and C2 of mixtures A, B and C, expressed in parts by weight of the constituent, lie within the range going from 0.5 to 30 parts by weight per 100 parts of the polyorganosiloxane constituent(s) of the curable compositions D[;].

2. (Twice Amended) The method according to claim 11, wherein the curable polyorganosiloxane compositions D, presented as one or more [(one-component or multicomponent)] packages, contain a main constituent formed from one or more polyorganosiloxane constituents, a suitable catalyst and, optionally, one or more

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compounds selected from the group [formed by] of: reinforcing, [or] semi-reinforcing, or bulking fillers; [or] fillers serving to modify the rheology of the curable compositions[,]; crosslinking agents[,]; adhesion promoters[,]; plasticizers[,]; catalysts; inhibitors; and colorants.

3. (Twice Amended) The method according to claim 2, wherein the [polyorganosiloxanes - the main constituents of compositions D -] polyorganosiloxane consist of siloxyl units of general formula:



and/or siloxyl units of formula:



in which formulae the various symbols have the following meaning:

- the symbols R, which are identical or different, each represent a non-hydrolysable hydrocarbon-type group defined as[, it being possible for this radical to be]:

- * alkyl and haloalkyl radicals having from 1 to 5 carbon atoms and containing from 1 to 6 chlorine and/or fluorine atoms;
- * cycloalkyl and halocycloalkyl radicals having from 3 to 8 carbon atoms and containing from 1 to 4 chlorine and/or fluorine atoms;

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- * aryl, alkylaryl and haloaryl radicals having from 6 to 8 carbon atoms and containing from 1 to 4 chlorine and/or fluorine atoms; or
- * cyanoalkyl radicals having from 3 to 4 carbon atoms;
- the symbols Z each represent a hydrogen atom or a C₂- C₆ alkenyl group;
- n = an integer equal to 0, 1, 2 or 3;
- x = an integer equal to 0, 1, 2 or 3;
- y = an integer equal to 0, 1 or 2;
- the sum x + y lies within the range going from 1 to 3.

4. (Twice Amended) The method according to claim 2, wherein the polyorganosiloxane compositions D are those one-component or two-component compositions [crosslinking] crosslinkable at room temperature or with [the] heat from polyaddition reactions, called RTV compositions, which comprise:

- (a) 100 parts by weight of at least one polydiorganosiloxane [chosen from] comprising linear homopolymers [and] or copolymers having at least 2 vinyl groups per molecule, these vinyl groups being linked to different silicon atoms and located in the chain and/or at the chain ends, the other organic radicals of which, linked to the silicon atoms, are chosen from methyl, ethyl and phenyl radicals, at least 60 mol% of these other radicals being methyl radicals, and having a viscosity ranging from 400 to 100,000 mPa.s at 25°C;

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- (b) at least one polyorganohydrosiloxane chosen from linear or cyclic homopolymers and copolymers having at least 2 hydrogen atoms per molecule, these hydrogen atoms being linked to different silicon atoms and the organic radicals of which, linked to the silicon atoms, are chosen from methyl, ethyl and phenyl radicals, at least 60 mol% of these radicals being methyl radicals, and having a viscosity ranging from 5 to 1000 mPa.s at 25°C, reactant (b) being used in an amount such that the molar ratio of the hydride functional groups of (b) to the vinyl groups of (a) is between 1.1 and 4;
- (c) a catalytically effective amount of a platinum catalyst;
- (d) 0 to 120 part(s) by weight of siliceous filler(s) per 100 parts by weight of the combination of polyorganosiloxanes (a) + (b).

5. (Twice Amended) The method according to claim 4, wherein up to 100% by weight of reactant (a) is replaced with a polyorganosiloxane resin containing from 0.1 to 20% by weight of one or more vinyl groups in its structure, said structure having at least two different units chosen from M (triorganosiloxy), D (diorganosiloxy), T (monoorganosiloxy) and Q ($\text{SiO}_{4/2}$) units, at least one of these units being a T or Q unit[, it being possible for the vinyl group(s) to be carried by the M, D and/or T units].

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6. (Twice Amended) The method according to claim 2, wherein the polyorganosiloxane compositions D are those one-component or two-component compositions [crosslinking] crosslinkable with [the] heat from polyaddition reactions, called LSR compositions, these compositions satisfying the definitions with regard to [so-called RTV] polyorganosiloxane compositions crosslinkable at room temperature except with regard to the viscosity of the vinyl-containing polydiorganosiloxane reactant (a) which this time lies within the range going from a value greater than 100,000 mPa.s to 500,000 mPa.s.

7. (Twice Amended) The method according to claim 2, wherein the polyorganosiloxane compositions D are those one-component or two-component compositions [crosslinking] crosslinkable with [the] heat from polyaddition reactions, called polyaddition EVC compositions, which comprise:

- (a') 100 parts by weight of polydiorganosiloxane gum which is a linear homopolymer or copolymer having at least 2 vinyl groups per molecule, these vinyl groups being linked to different silicon atoms and located in the chain and/or at the chain ends, the other organic radicals of which, linked to the silicon atoms, are chosen from methyl, ethyl and phenyl radicals, at least 60 mol% of these other radicals being methyl radicals, and the said gum having a viscosity of greater than 500,000 mPa.s at 25°C;

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- (b') at least one polyorganohydrosiloxane chosen from linear, cyclic or network homopolymers and copolymers having at least 3 hydrogen atoms per molecule, these hydrogen atoms being linked to different silicon atoms, and the organic radicals of which, linked to the silicon atoms, are chosen from methyl, ethyl and phenyl radicals, at least 60 mol% of these radicals being methyl radicals, and having a viscosity ranging from 5 to 1000 mPa.s at 25°C, reactant (b') being used in an amount such that the molar ratio of the hydride functional groups of (b') to the vinyl groups of (a') is between 0.4 and 10;
- (c') a catalytically effective amount of a platinum catalyst;
- (d') 0.5 to 120 parts by weight of siliceous filler(s) per 100 parts by weight of the combination of polyorganosiloxanes (a') + (b').

9. (Twice Amended) Articles made of silicone elastomer having good arc-tracking and arc-erosion resistance properties, and good flame-resistance properties and good mechanical properties, which are obtained by crosslinking:

- polyorganosiloxane compositions D as defined in claim 1.